



# SOCIETAL IMPACT

of the Novo Nordisk Foundation's grant activities

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Highlights for 2019

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The Novo Nordisk  
Foundation's vision  
is to contribute  
significantly to research  
and development that  
improves the lives  
of people and the  
sustainability of society.

# Novo Nordisk Foundation

## **Funding public research for more than 90 years**

Since 1927, the Novo Nordisk Foundation has awarded grants to researchers at universities and hospitals in Denmark and the other Nordic countries. Today, the Foundation supports research in biomedicine, biotechnology, general practice, nursing, art history and scientific objectives within innovation, education and outreach as well as humanitarian and social purposes.

## **Advocating public research**

This brochure presents some highlights from the annual impact report showing the Foundation's input of resources and the subsequent effects on research, health and companies.

# Key impact

## input, activities, output & outcome

### Overall grant-giving



In 2019

**DKK 4.9**  
billion awarded

**DKK 3.6**  
billion paid out

**9.5%**  
of public research  
was funded by the  
Foundation

### Supporting people in science and knowledge creation



In 2019

**4,100**  
jobs in science

**1,780**  
PhDs and postdocs  
supported

**2,800**  
new publications  
were published

**61%**  
of journal articles  
published in 2014–2018  
were co-authored  
with international  
collaborators

### Promoting excellent research



In 2015–2017

**23%**  
of journal articles  
published are among  
top 10% most frequently  
cited in the world

**4%**  
of journal articles  
published are among  
top 1% most frequently  
cited in the world

**60%**  
of grants in open  
competition produced  
a journal article among  
the 10% most frequently  
cited within their field

## Research-based innovation



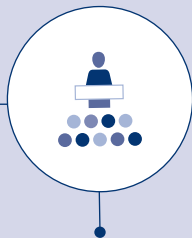
In 2019

**18%**  
of Foundation-funded journal articles cited in patent applications or granted patents 9 years after their publication

**11%**  
of journal articles published were co-authored with industrial researchers

**11**  
new spinouts were created

## Education, outreach and policy contribution



In 2019

**22,000**  
people reached by research-based educational activities taught or organised by grant recipients

**300,000**  
people reached by scientific outreach activities (e.g. talks or workshops)

**73**  
Foundation-supported members of guideline or policy committees

## Health and patient care



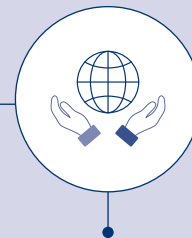
In 2019

**27,000**  
patients treated at Steno Diabetes Centres in Denmark

**48**  
commercial products were found to be directly or indirectly linked to Foundation-funded journal articles published since 1994

**54%**  
of clinical diabetes guidelines published cited Foundation-funded research

## Humanitarian aid



In 2014–2019

**800,000**  
people supported in Foundation-funded humanitarian crisis initiatives

**500,000**  
of those people were supported by acute humanitarian interventions

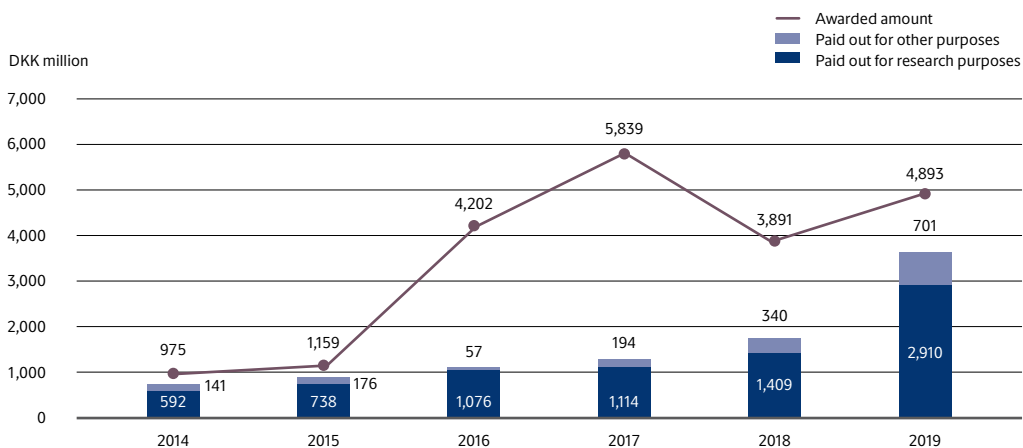
**45**  
countries reached by Foundation-funded humanitarian interventions



## Investing in knowledge and society

Development in grants and payouts from the Foundation

9.5%  
of public research  
was funded by the Foundation



The Foundation has four grant-giving models and several grant instruments. As part of the Foundation's strategy, the total payout has increased for all grant-giving models and grant instruments used by the Foundation between 2014 and 2019.







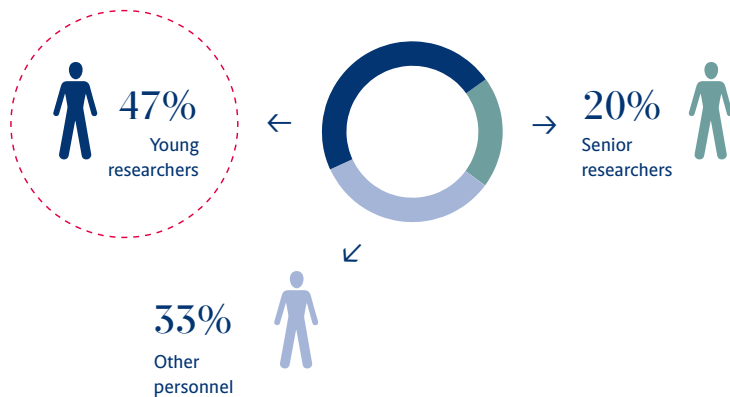
# Supporting people in science and knowledge creation

The number of people funded fully or partly by the Foundation, distributed between early career researchers and more senior researchers

2018

**3,021**

Number of people fully or partly funded by the Foundation





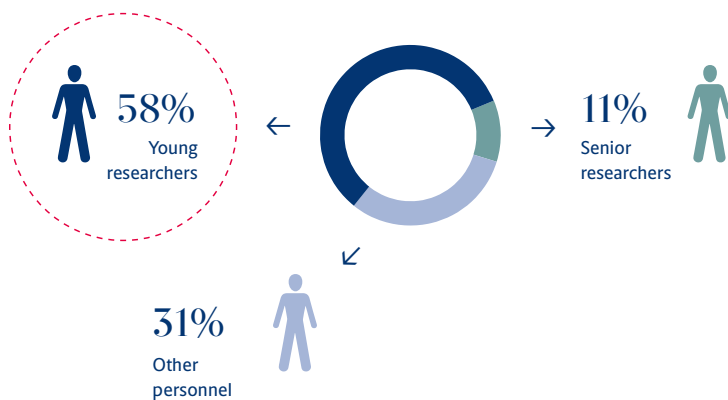
# 11 percentage points increase from 2018 to 2019

in the of the share of young researchers in science supported by the Foundation

2019

4,087

Number of people  
fully or partly funded by  
the Foundation

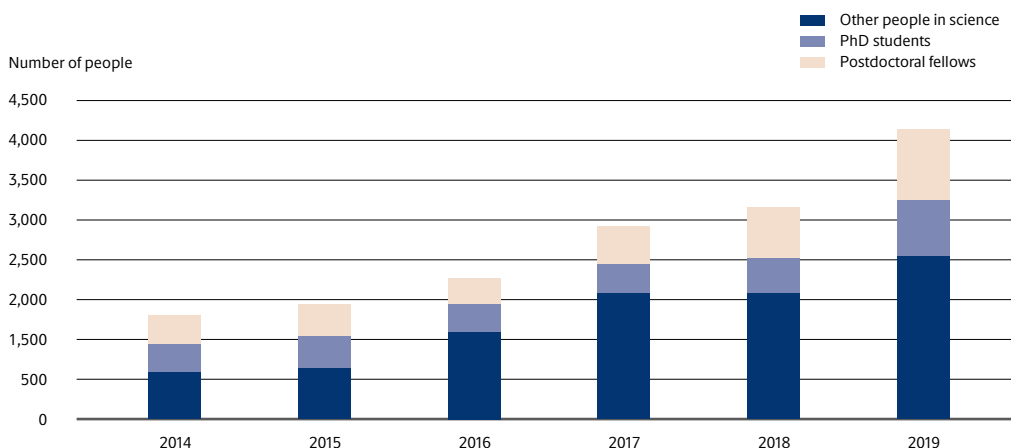




## Supporting people in science and knowledge creation

Increase in number of people fully or partly supported by the Foundation, 2014–2019

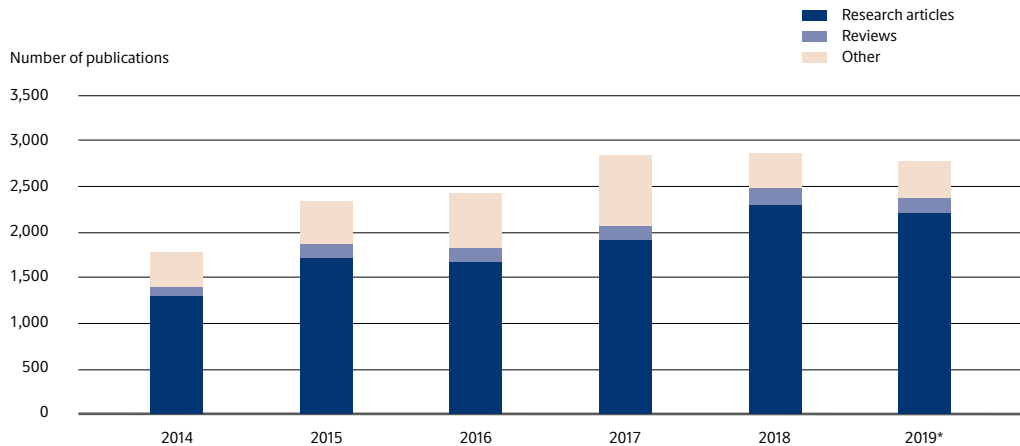
4,100  
jobs in science



The Foundation aims to support the development of talents and that institutions can attract talented researchers from other countries at all career stages to Denmark. In 2019, the Foundation fully or partly funded 4,087 people within science or research hospital settings.

61%  
of journal articles  
published in 2014–2018 were co-authored  
with international collaborators

### Total number of publications published by recipients of Foundation grants, 2014–2019



\* Preliminary estimate. The actual figure is likely to be higher, since every year in January grant recipients also report publications they have previously omitted.

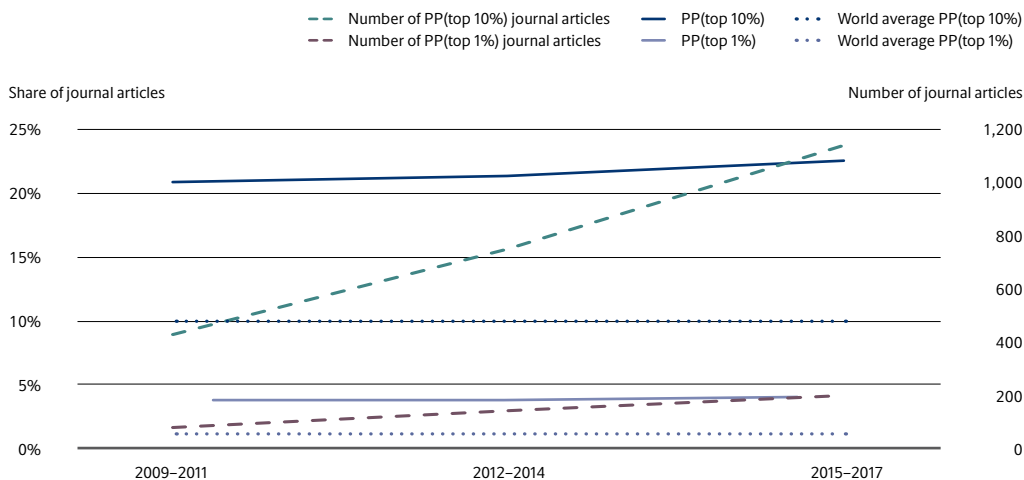
The Foundation aims to support research excellence, research collaboration and knowledge creation in all fields of science. In 2019, grant recipients reported almost 2,800 publications. Of the publications published from 2014 to 2019 funded by the Foundation, about 80% were journal articles (research articles and reviews) and 20% were other publications, such as policy papers, technical reports, letters and book chapters.



## Using knowledge in academic research

The number and share of journal articles by Foundation grant recipients among the top 1% and 10% most frequently cited journal articles in the world, 2009–2017

**23%**  
of the journal articles  
are in the top 10% most frequently  
cited journal articles in 2015–2017



The Foundation tracks the share of Foundation-funded journal articles among the 1% and 10% most frequently cited journal articles worldwide. The Foundation-funded research maintains a steady fraction (4%) of the top 1% of global research according to this citation impact measure.

4%

of journal articles published are among the top 1% most frequently cited in the world.



60%

of the funded research teams in open-competition grants produce a journal article among the 10% most frequently cited worldwide.





## Research-based innovation



8,000

research and innovation  
grants since 2000

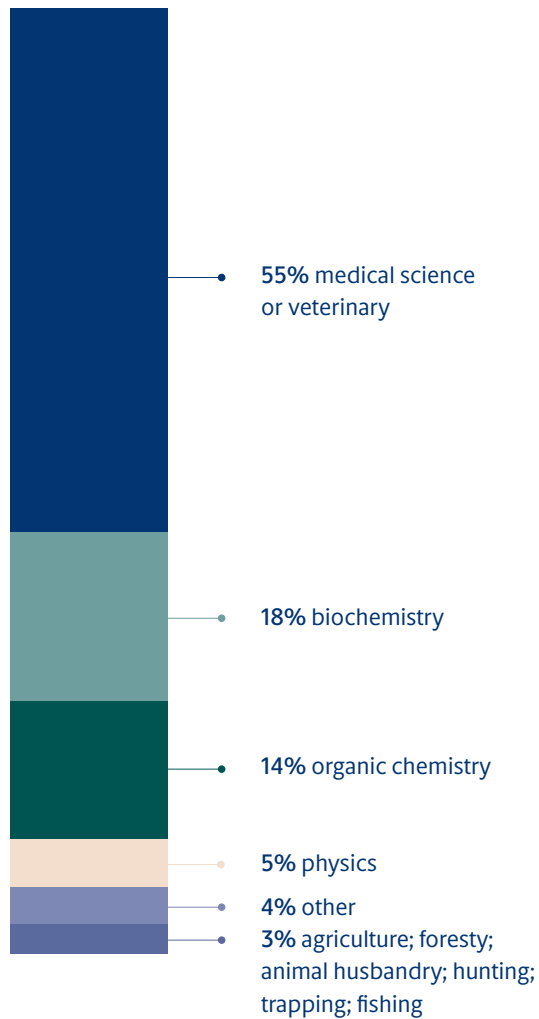
20,000

Foundation-funded journal  
articles since 2000



18%  
cited in patents  
9 years after their publication

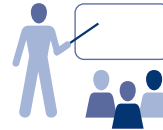
## Technological classification







## Using knowledge in education, outreach and policy contribution



Foundation-funded grants delivered knowledge to education, the general public and policy in 2019

### Course activity

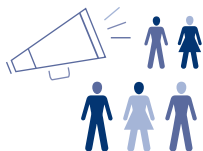
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25%

of grants  
include course activities

22,000

people reached



## Outreach

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28%

of grants

include outreach activities

300,000

people reached



## Policy

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305

contributions

to policy and practice reported  
by 127 grants during 2015–2019

73

members of policy bodies



## Using knowledge in the health sector

Foundation-supported grants turn research and discoveries into medical interventions, new technologies, treatments for diseases, clinical trials, health interventions and diagnostics, products and clinical guidelines.

37  
clinical trials  
supported by the  
Foundation 2014–2019

9,595 people are enrolled  
in the 26 clinical trials registered



26

clinical trials registered  
on [clinicaltrials.gov](https://clinicaltrials.gov)



| Clinical trials | Phase      | People |
|-----------------|------------|--------|
| 2               | Phase I    | 167    |
| 4               | Phase II   | 412    |
| 2               | Phase III  | 4657   |
| 5               | Phase IV   | 1889   |
| 13              | NA/Unknown | 2470   |

Clinical guidelines and treatment  
recommendations citing  
Foundation-funded research

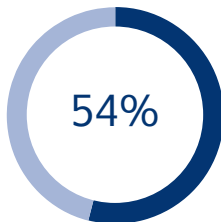
24%  
of 800 guidelines

that cover three areas of disease – diabetes, cardiovascular  
diseases and cancer – cite Foundation-funded journal articles



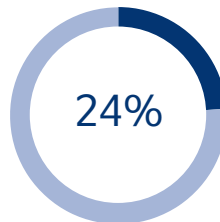
## Diabetes

145 guidelines  
(2008–2019)



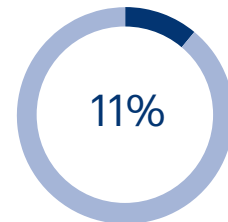
## Cardiology

297 guidelines  
(2008–2019)



## Cancer

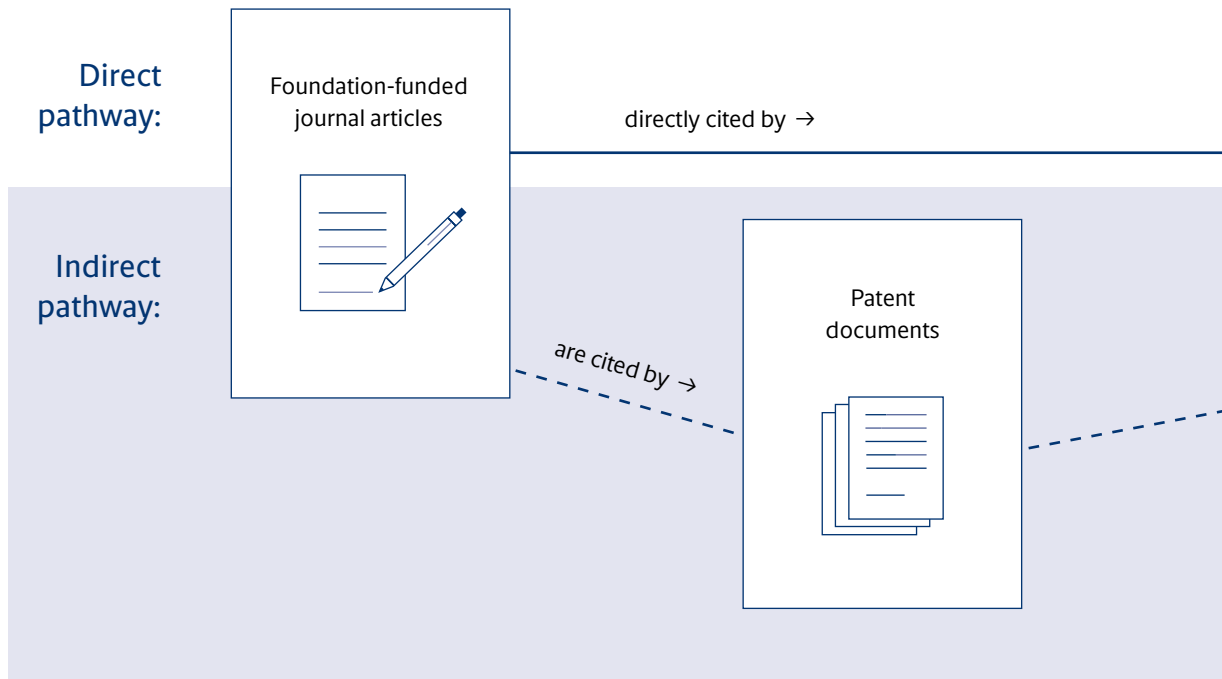
358 guidelines  
(2014–2019)



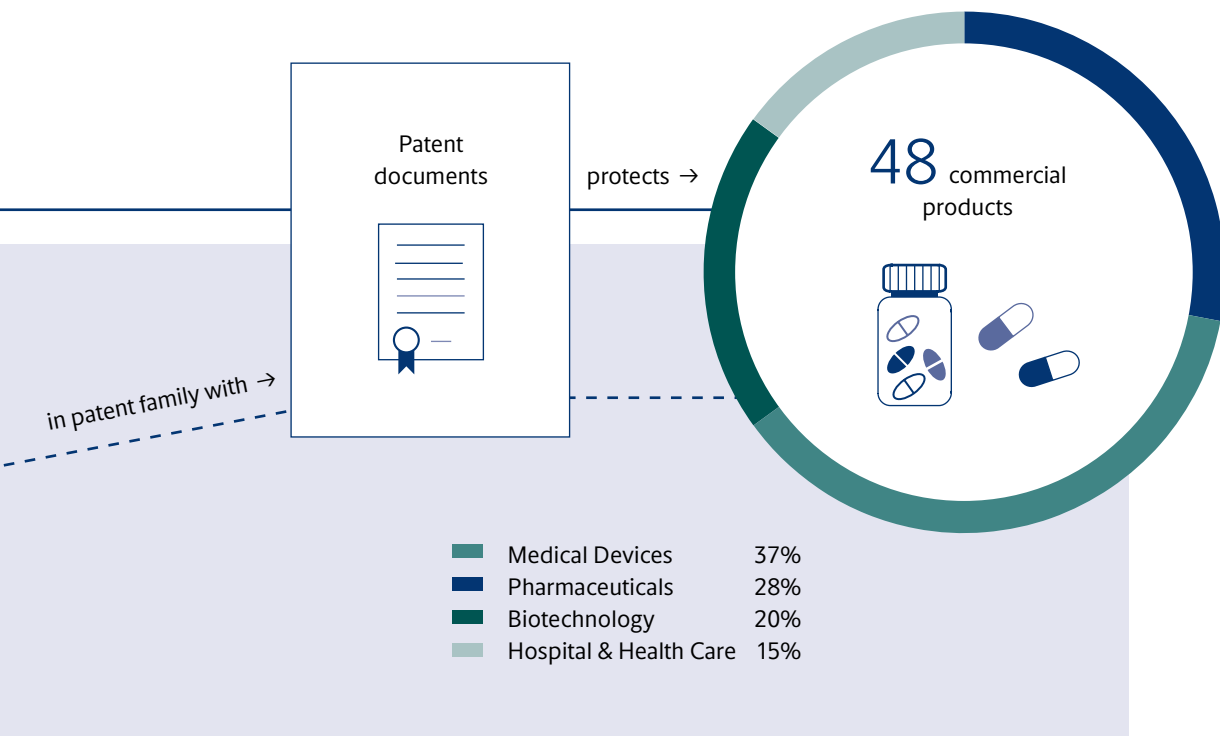


# Using knowledge in the health sector

48 commercial products can be directly or indirectly  
linked to Foundation-funded journal articles



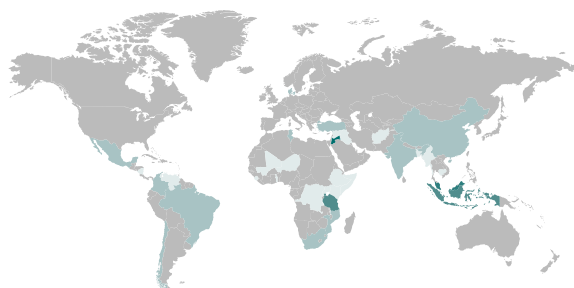
2,238  
patent documents  
cite Foundation-funded  
journal articles from 1994 to 2017





800,000 people have received development aid or humanitarian aid

Amount awarded by the Foundation for education, health and social causes, distributed geographically, 2014–2019

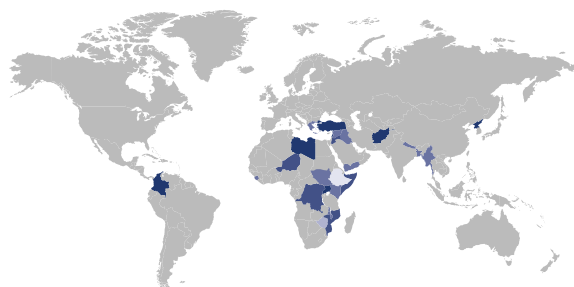


DKK 22,500



DKK 180,500,000

Amount awarded by the Foundation for acute humanitarian interventions distributed geographically, 2014–2019



DKK 240,000



DKK 4,000,000



# Sustainable Development Goals

In 2014–2019, the Novo Nordisk Foundation's grant-awarding activities led to actions that support the 17 UN Sustainable Development Goals (SDGs). Most grants have relevance for up to three SDGs each.



160 grants  
88 DKK million



122 grants  
52 DKK million



1,665 grants  
5,052 DKK million



1,138 grants  
1,866 DKK million



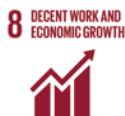
5 grants  
3 DKK million



57 grants  
11 DKK million



13 grants  
4 DKK million



975 grants  
1,799 DKK million



2,162 grants  
6,969 DKK million



137 grants  
201 DKK million



7 grants  
1 DKK million



167 grants  
231 DKK million



39 grants  
245 DKK million



1 grant  
1 DKK million



76 grants  
64 DKK million



1 grants  
1 DKK million



188 grants  
4,367 DKK million

# Benefiting people and society

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